

SEQUENCE LISTING

<110> Kirchgessner, Todd G.
 Hsiang, Bonnie
 Zhu, Yingjie
 Wang, Zhaoqing
 Lynch, Jean S.
 Huang, Xin
 Yang, Wen-Pin
 Wu, Yuli

<120> NOVEL ORGANIC ANION TRANSPORT PROTEINS

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 Pro Val Gln Pro Leu Gly Val Ser Tyr Ile Asp Asp His Val Arg Arg
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 Gly Pro Ala Cys Gly Phe Ile Leu Gly Ser Phe Cys Thr Lys Ile Tyr
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Leu Ile Arg Thr Val Ser Pro Glu Leu Lys Ser Tyr Ala Leu Gly Val
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<213> Homo sapiens

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Xaa Arg Ser Lys Ser Leu Pro Val Leu Ser Ser Ala Ser Cys Arg Pro
35 40 45

Ser Leu Ser Pro Thr Ser Gly Asp Ala Asn Pro Ala Phe Gly Cys Val
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Asp Ser Ser Gly His Gln Glu Leu Lys Gln Gly Pro Asn Pro Leu Ala
65 70 75 80

Pro Ser Pro Ser Ala Pro Ser Thr Ser Ala Gly Leu Gly Asp Cys Asn
85 90 95

His Arg Val Asp Leu Ser Lys Thr Phe Ser Val Ser Ser Ala Leu Ala
100 105 110

Met Leu Gln Glu Arg Arg Cys Leu Tyr Val Val Leu Thr Asp Ser Arg
115 120 125

Cys Phe Leu Val Cys Met Cys Phe Leu Thr Phe Ile Gln Ala Leu Met
130 135 140

Val Ser Gly Tyr Leu Ser Ser Val Ile Thr Thr Ile Glu Arg Arg Tyr
145 150 155 160

Ser Leu Lys Ser Ser Glu Ser Gly Leu Leu Val Ser Cys Phe Asp Ile
165 170 175

Gly Asn Leu Val Val Val Val Phe Val Ser Tyr Phe Gly Gly Arg Gly
180 185 190

Arg Arg Pro Leu Trp Leu Ala Val Gly Gly Leu Leu Ile Ala Phe Gly
195 200 205

Ala Ala Leu Phe Ala Leu Pro His Phe Ile Ser Pro Pro Tyr Gln Ile
210 215 220

Gln Glu Leu Asn Ala Ser Ala Pro Asn Asp Gly Leu Cys Gln Gly Gly
225 230 235 240

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Leu	Ile	Gly	Met	Gly	Ser	Thr	Pro	Ile	Tyr	Thr	Leu	Gly	Pro	Thr	Tyr	
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Leu	Asp	Asp	Asn	Val	Lys	Lys	Glu	Asn	Ser	Ser	Leu	Tyr	Leu	Ala	Ile	
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Met	Tyr	Val	Met	Gly	Ala	Leu	Gly	Pro	Ala	Val	Gly	Tyr	Leu	Leu	Gly	
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Pro	Lys	Lys	Leu	Pro	Pro	Arg	His	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Phe
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Ile	Asn	Leu	Gly	Gly	Ile	Asn	Ile	Pro	Tyr	Thr	Thr	Gly	Pro	Ser	Leu	
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Thr Met Pro His Arg Asn Leu Thr Gly Ser Cys Asn Val Asn Cys Gly
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 Cys Lys Ile His Glu Tyr Glu Pro Val Cys Gly Ser Asp Gly Ile Thr
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 Thr Xaa Ile Arg Asn Tyr Thr Glu Cys Thr Cys Val Gln Ser Arg Gln
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 Val Ile Thr Pro Pro Thr Val Gly Gln Arg Ser Gln Leu Arg Val Val
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 Gln Phe Val Leu Leu Arg Thr Leu Ala Tyr Ile Pro Thr Pro Ile Tyr
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 Phe Gly Ala Val Ile Asp Thr Thr Cys Met Leu Trp Gln Gln Glu Cys
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 Gly Val Gln Gly Ser Cys Trp Glu Tyr Asn Val Thr Ser Phe Arg Phe
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 Val Tyr Phe Gly Leu Ala Ala Gly Leu Lys Phe Val Gly Phe Ile Phe
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 Ile Phe Leu Ala Trp Tyr Ser Ile Lys Tyr Lys Glu Asp Gly Leu Gln
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 Gln Gly Glu Phe His Glu Glu Thr Gly Leu Gln Lys Gly Ile Gln Cys
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 <211> 3381
 <212> DNA
 <213> Homo sapiens

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<212> PRT

<213> Homo sapiens

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35 40 45

Leu Ser Phe Val Tyr Phe Ala Lys Ala Leu Ala Glu Gly Tyr Leu Lys
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Ser Thr Ile Thr Gln Ile Glu Arg Arg Phe Asp Ile Pro Ser Ser Leu
65 70 75 80

Val Gly Val Ile Asp Gly Ser Phe Glu Ile Gly Asn Leu Leu Val Ile
85 90 95

Thr Phe Val Ser Tyr Phe Gly Ala Lys Leu His Arg Pro Lys Ile Ile
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Gly Ala Gly Cys Val Ile Met Gly Val Gly Thr Leu Leu Ile Ala Met
115 120 125

Pro Gln Phe Phe Met Glu Gln Tyr Lys Tyr Glu Arg Tyr Ser Pro Ser
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Ser Asn Ser Thr Leu Ser Ile Ser Pro Cys Leu Leu Glu Ser Ser Ser
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Gln Leu Pro Val Ser Val Met Glu Lys Ser Lys Ser Lys Ile Ser Asn
165 170 175

Glu Cys Glu Val Asp Thr Ser Ser Ser Met Trp Ile Tyr Val Phe Leu
180 185 190

Gly Asn Leu Leu Arg Gly Ile Gly Glu Thr Pro Ile Gln Pro Leu Gly
195 200 205

Ile Ala Tyr Leu Asp Asp Phe Ala Ser Glu Asp Asn Ala Ala Phe Tyr
210 215 220

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 225 230 235 240
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 245 250 255
 Asn Leu Asp His Ile Thr Ile Thr Pro Lys Asp Pro Gln Trp Val Gly
 260 265 270
 Ala Trp Trp Leu Gly Tyr Leu Ile Ala Gly Ile Ile Ser Leu Leu Ala
 275 280 285
 Ala Val Pro Phe Trp Tyr Leu Pro Lys Ser Leu Pro Arg Ser Gln Ser
 290 295 300
 Arg Glu Asp Ser Asn Ser Ser Ser Glu Lys Ser Lys Phe Ile Ile Asp
 305 310 315 320
 Asp His Thr Asp Tyr Gln Thr Pro Gln Gly Glu Asn Ala Lys Ile Met
 325 330 335
 Glu Met Ala Arg Asp Phe Leu Pro Ser Leu Lys Asn Leu Phe Gly Asn
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 Pro Val Tyr Phe Leu Tyr Leu Cys Thr Ser Thr Val Gln Phe Asn Ser
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 Leu Phe Gly Met Val Thr Tyr Lys Pro Lys Tyr Ile Glu Gln Gln Tyr
 370 375 380
 Gly Gln Ser Ser Ser Arg Ala Asn Phe Val Ile Gly Leu Ile Asn Ile
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 Pro Ala Val Ala Leu Gly Ile Phe Ser Gly Gly Ile Val Met Lys Lys
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 Phe Arg Ile Ser Val Cys Gly Ala Ala Lys Leu Tyr Leu Gly Ser Ser
 420 425 430
 Val Phe Gly Tyr Leu Leu Phe Leu Ser Leu Phe Ala Leu Gly Cys Glu
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 Asn Ser Asp Val Ala Gly Leu Thr Val Ser Tyr Gln Gly Thr Lys Pro
 450 455 460
 Val Ser Tyr His Glu Arg Ala Leu Phe Ser Asp Cys Asn Ser Arg Cys
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 Lys Cys Ser Glu Thr Lys Trp Glu Pro Met Cys Gly Glu Asn Gly Ile
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 Thr Tyr Val Ser Ala Cys Leu Ala Gly Cys Gln Thr Ser Asn Arg Ser
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 Gly Lys Asn Ile Ile Phe Tyr Asn Cys Thr Cys Val Gly Ile Ala Ala
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 Gly Val Leu Ile Asp Thr Ser Cys Leu Lys Trp Gly Phe Lys Arg Cys
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 Arg Ser Phe Ile Thr Lys Arg Glu Arg Thr Met Val Ser Thr Arg Phe
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35 40 45
His Ser Pro Leu Asp Thr Ser Lys Gln Pro Leu Cys Gln Leu Trp Ala
50 55 60
Glu Lys His Gly Ala Arg Gly Thr His Glu Val Arg Tyr Val Ser Ala
65 70 75 80
Gly Gln Ser Val Ala Cys Gly Trp Trp Ala Phe Ala Pro Pro Cys Leu
85 90 95
Gln Val Leu Asn Thr Pro Lys Gly Ile Leu Phe Phe Leu Cys Ala Ala
100 105 110
Ala Phe Leu Gln Gly Met Thr Val Asn Gly Phe Ile Asn Thr Val Ile
115 120 125
Thr Ser Leu Glu Arg Arg Tyr Asp Leu His Ser Tyr Gln Ser Gly Leu

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Ser Tyr Phe Gly Gly Ser Gly His Lys Pro Arg Trp Leu Gly Trp Gly				
165	170	175		
Val Leu Leu Met Gly Thr Gly Ser Leu Val Phe Ala Leu Pro His Phe				
180	185	190		
Thr Ala Gly Arg Tyr Glu Val Glu Leu Asp Ala Gly Val Arg Thr Cys				
195	200	205		
Pro Ala Asn Pro Gly Ala Val Cys Ala Asp Ser Thr Ser Gly Leu Ser				
210	215	220		
Arg Tyr Gln Leu Val Phe Met Leu Gly Gln Phe Leu His Gly Val Gly				
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Ala Thr Pro Leu Tyr Thr Leu Gly Val Thr Tyr Leu Asp Glu Asn Val				
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Lys Ser Ser Cys Ser Pro Val Tyr Ile Ala Ile Phe Tyr Thr Ala Ala				
260	265	270		
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Ile Tyr Thr Glu Met Gly Arg Arg Thr Glu Leu Thr Thr Glu Ser Pro				
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Leu Trp Val Gly Ala Trp Trp Val Gly Phe Leu Gly Ser Gly Ala Ala				
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Ala Phe Phe Thr Ala Val Pro Ile Leu Gly Tyr Pro Arg Gln Leu Pro				
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Gly Ser Gln Arg Tyr Ala Val Met Arg Ala Ala Glu Met His Gln Leu				
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Lys Asp Ser Ser Arg Gly Glu Ala Ser Asn Pro Asp Phe Gly Lys Thr				
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Phe Ile Leu Leu Cys Leu Ala Gly Ala Thr Glu Ala Thr Leu Ile Thr				
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Gly Met Ser Thr Phe Ser Pro Lys Phe Leu Glu Ser Gln Phe Ser Leu				
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Ser Ala Ser Glu Ala Ala Thr Leu Phe Gly Tyr Leu Val Val Pro Ala				
420	425	430		
Gly Gly Gly Gly Thr Phe Leu Gly Gly Phe Phe Val Asn Lys Leu Arg				
435	440	445		
Leu Arg Gly Ser Ala Val Ile Lys Phe Cys Leu Phe Cys Thr Val Val				
450	455	460		
Ser Leu Leu Gly Ile Leu Val Phe Ser Leu His Cys Pro Ser Val Pro				
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485	490	495		
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Glu His Tyr Ser Pro Val Cys Gly Ser Asp Gly Leu Met Tyr Phe Ser				
515	520	525		
Leu Cys His Ala Gly Cys Pro Ala Ala Thr Glu Thr Asn Val Asp Gly				
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Gln Lys Val Tyr Arg Asp Cys Ser Cys Ile Pro Gln Asn Leu Ser Ser				
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Gly Phe Gly His Ala Thr Ala Gly Lys Cys Thr Ser Thr Cys Gln Arg				
565	570	575		
Lys Pro Leu Leu Leu Val Phe Ile Phe Val Val Ile Phe Phe Thr Phe				
580	585	590		

Leu Ser Ser Ile Pro Ala Leu Thr Ala Thr Leu Arg Cys Val Arg Asp
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 625 630 635 640
 Ala Cys Leu Leu Trp Gln Asp Gln Cys Gly Gln Gln Gly Ser Cys Leu
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 Val Tyr Gln Asn Ser Ala Met Ser Arg Tyr Ile Leu Ile Met Gly Leu
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 Leu Tyr Lys Val Leu Gly Val Leu Phe Phe Ala Ile Ala Cys Phe Leu
 675 680 685
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